

**SYSTEMS AND METHODS FOR ADAPTIVELY ALLOCATING
RESOURCES BETWEEN A DEDICATED REFERENCE SIGNAL
AND A TRAFFIC SIGNAL**

ABSTRACT

Systems and methods for adaptively allocating resources between a dedicated reference signal and a traffic signal are disclosed. In an exemplary embodiment, a wireless communication system 100 includes a base station 404. The base station 404 includes a receiver 428 that receives a quality metric 432 from a remote station 106. The quality metric 432 indicates the quality of a signal transmitted from the base station 404 and received by the remote station 106. The base station 404 also includes a resource allocation component 434 that uses the quality metric 432 to allocate a resource between the traffic signal 422 and the dedicated reference signal 418. The base station 404 also includes a transmitter 426 that transmits the traffic signal 422 and the dedicated reference signal 418 to the remote station 106.